

- CLAIMS -

1.-A material for medical or veterinary usage, in particular for the realisation of endo-bone implants, in particular dental implants, or for the realisation of bone prostheses, which material is in the form of a moulded part, made of a biocompatible binder containing one or several compounds for adding calcium and phosphorus, characterised in that it has been subjected to a surface pickling operation.

2.- A method according to claim 1, characterised in that it comprises calcium phosphate as a compound enabling the addition of calcium and of phosphorus, which calcium phosphate is derived from calcium hydroxyapatite and/or dicalcic or tricalcic phosphate.

3.- A material according to any of the claims 1 or 2, characterised in that it comprises a binder in the form of a thermoplastic polymer.

4.- A method according to claim 3, characterised in that it comprises a binder in the form of a thermoplastic polymer such as PEEK (polyetheretherketone).

5. - A material according to any of the claims 1 to 4, characterised in that it comprises a binder in the form of a thermoplastic polymer such as cellulose.

6.- A material according to any of the claims 1 to 5, characterised in that it comprises a compound of zeolite or oxide type, such as TiO_2 , SiO_2 , Al_2O_3 or ZrO_2 .

7.- A material device according to any of the claims 1 to 6, characterised in that it comprises,

- 65 to 90 % in weight of polymer binder , and
- 10 to 35% in weight of complementary component(s) in the form of calcium hydroxyapatite and/or dicalcic or tricalcic phosphate, possibly associated with at least one zeolite or an oxide.

8.- A method of production of the material for medical or veterinary usage according to any of claims 1 to 7, characterised in that it consists:

- in mixing homogeneously a mouldable binder biocompatible with one or several components for adding calcium and phosphorus,
- in subjecting the mixture thus obtained to a moulding operation,
- in performing one or several surface pickling and decontamination operations of the moulded part,
- in conditioning aseptically said decontaminated part.

9- A method according to claim 8, characterised in that the surface pickling operation is conducted by dint of at least one bath in a solution subjected to ultrasounds.

10- A method according to claim 9, characterised in that the surface pickling operation is conducted by dint of at least one pickling product bath subjected to ultrasounds.

5 11- A method according to claim 10, characterised in that the surface treatment is conducted by passing the moulded material in different successive baths subjected to ultrasounds.

12- A method according to claim 11, characterised in that the surface treatment is conducted by passing the moulded material in at least an acid bath of hydrochloric acid or sulphuric acid type.

10 13 - A material according to any of the claims 11 or 12, characterised in that the surface treatment is conducted by passing the material in at least one acetone bath.

14 - A material according to any of the claims 11 to 13, characterised in that the surface treatment is conducted by passing the material in at least one hydrogen peroxide bath.

15 15 - A material according to any of the claims 11 to 14, characterised in that the surface treatment is conducted by passing the material in at least one sodium hypochloride bath.

20 16 - A material according to any of the claims 11 to 15, characterised in that it consists in subjecting the moulded part to a decontamination treatment by means of baths conducting the surface pickling/decontamination treatment, associated with at least one complementary bath of decontaminating product.

25 17 - A material according to any of the claims 8 to 16, characterised in that the surface pickling and decontamination operations consist in passing the moulded part in successive baths of hydrochloric or sulphuric acid, acetone, hydrogen peroxide, sodium hypochloride and disinfectant product(s), subjected to ultrasounds, separated by operations consisting in water rinsing or passing in water baths subjected to ultrasounds.

30 18 - A material according to any of the claims 8 to 17, characterised in that it consists in subjecting the moulded part to a sterilisation operation by autoclave after passing in at least one solution bath subjected to ultrasounds.

19 – An application of the material according to any of the claims 1 or 7, or obtained by the method according to any of claims 8 to 18, for the realisation of endo-bone implants, in particular dental implants.

20 – An application of the material according to any of the claims 1 to 7, or obtained by the method according to any of claims 8 to 18, for the realisation of bone prostheses.